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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,385	04/01/2004	Hossein Eslambolchi	2002-0524CON	7594

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AT&T CORP.
ROOM 2A207
ONE AT&T WAY
BEDMINSTER, NJ 07921

EXAMINER	
NGUYEN, VINH P	

ART UNIT	PAPER NUMBER
2829	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/815,385	ESLAMBOLCHI ET AL.	
	Examiner	Art Unit	
	VINH P. NGUYEN	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Claims 27-29 ,32 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 27 and 29, it is unclear how the voltage comparator of the instant application is used for detecting an insulating fault when a voltage source applies an AC/DC cable locating tone to the conductor since the tone signal is different from the electrical signal. It appears that the voltage comparator (270) of the instant application is not capable to perform such task.

In claim 32, it is unclear what "a cable locating conductor" comprises of. Is it shown in figures 2-3.

In claim 41, it is unclear which device is used for initially determining an approximate position of the fault ...". It appears that the specification does not specifically describe how this device is interrelated and associated with the voltage comparator and the voltage probes in order to initially determine an approximate position of the fault by determining a position along the cable where an above ground detectability of the cable locating current degrades.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20-22,24,26,30-31,33-34,36-38,42 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (Pg Pub # 2001/0052778 A1).

As to claims 20,26,34,38 Smith disclose in figure 2 an insulation detection system for locating an insulation fault on a cable having a cable (130,115,125), a voltage probe (170) adapted to be positioned adjacent the cable (130,115,125) to establish electrical continuity with the cable (130,115,125) and to be displaced along the cable and a tester (180) electrically connected to the voltage probe (170) for generating a high voltage between about 50 volts and about 15,0000 volts (see page 4 ,paragraph # 0037) and for detecting an insulation fault when the voltage probe (170) is positioned adjacent the fault (140). It appears that the tester (180) inherently has a voltage source for applying between 50 volts and about 15,0000 to the conductor in which this range would include the range of approximately 80 and 100 volts. It is noted that the high voltage breakdown tester (380) would be equivalent to the voltage comparator of the instant application since it serves the same purpose as the one in the instant application. Furthermore, it is noted that the cable (130,115,125) is at least partially submerged in a liquid (gas) when the gas from the gas source (160) flowing to the voltage probe (170). It is also noted that the term "liquid" would include gas, water

As to claim 21, Smith discloses a body (a support in which the voltage probe (170) is disponsed thereon) being adapted to at least partially surround a transverse section of the cable (130,115,125).

As to claim 22, it appears that the voltage probe (170) includes a plurality of voltage probes (170) angularly spaced around a transverse section of the cable.

As to claim 24, it appears that the voltage probe (170) represents a conductive surface facing the cable (130,115,125).

As to claim 30,Smith also discloses a body (190) for holding the voltage probe (170).

As to claim 31, it appears that the voltage probe (170) comprises a plurality of voltage probes (170) angularly spaced around the traverse section of the cable (see paragraphs 0034-0036).

As to claim 33, it appears that the voltage probe (170) represents a conductive surface facing the cable (130,115,135).

As to claim 34, the device of Smith as shown in figure 2 is inherently used to perform the method steps of the instant claim.

As to claim 36, it appears that the voltage probe (1700) includes a plurality of surfaces facing the cable (130,115,125).

As to claim 37, the voltage probe (170) is positioned adjacent the cable (130,115,125) includes at least partially surrounding the cable with the voltage probe (170).

As to claim 42, the apparatus of Smith inherently performs the method steps of the instant claim .

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 23,25,27-29,32,35,39-40 and 44-46, are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (Pg PUB # US-2001/0052778) in view of Applicant admitted prior art Eslambolchi et al (Pat # 5,644,237).

As to claims 23, 32 ,40 and 46, Smith does not disclose his cable is an optical fiber cable.

However, Eslsmonolchi et al teach that it would have been well known to have a cable such as optical fiber cable type. It would have been obvious for one of ordinary skill in the art to use the device of Smith to detect the insulation defect a different type of cable such as the optical fiber cable as taught by Eslsmonolchi et al. Furthermore, the type of the device under test is not given any patentable weight since the device under test is not a part of the invention.

As to claims 25 and 35, Eslambolchi et al disclose gas as liquid. It would have been well known that the liquid could include ground water.

As to claim 27-29,39 and 44-45, Smith does not teach that his voltage source applies an AC cable locating tone and a sound alarm when the fault is detected . However, Eslambolchi et al teach that it would have been well known to have the voltage source applied an AC/DC cable locating tone and this tone is between approximately 220 and 440 Hz . It would have been well

known for one of ordinary skill in the art to have the voltage source of Smith applied an AC/DC cable locating tone at approximately 220 and 440 HZ to the cable as taught by Eslambolchi et al so that the cable is located by an audible tone (alarm sound) when the fault is detected.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

De Angelis (Pat # 5,834,942) disclose equipment for determining when synthetic fiber cables are ready to be replaced.

Bengtsson et al (Pat # 6,340,890) disclose method and device for locating partial discharges in an electric high voltage apparatus.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P. NGUYEN whose telephone number is 571-272-1964. The examiner can normally be reached on 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HA T. NGUYEN can be reached on 571-272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VINH P NGUYEN
Primary Examiner
Art Unit 2829
09/25/06